

## REMARKS

Claims 1-13, 15-17, and 22 are pending in the application and stand rejected. The Examiner's reconsideration of the rejection in view of the following remarks is respectfully requested.

### Claim Rejections- 35 U.S.C. § 103:

Claims 1, 2, 4-7, 9-17, and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Calvert et al. (U.S. 6,348,240) in view of applicants' admitted prior art (AAPA). Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Calvert in view of AAPA as applied to claims 1, 2, 4-7, 9-17, and 22 above, and further in view of Schnur et al. (U.S. 5,079,600). Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Calvert in view of AAPA and Nagura (U.S. 5,841,856).

Applicants respectfully submit that at the very minimum Calvert does not suggest or disclose a method for forming an electrically conductive layer having patterns comprising, *inter alia*, the steps of *forming a first insulating layer on the substrate...forming a second insulating layer on the first insulating, the second insulating layer having predetermined functional groups*, as essentially claimed in claims 1, 15 and 22.

Examiner contends on page 2 of the Final Office Action that Calvert discloses forming a first insulation layer on a substrate, wherein said layer is a diamond layer (Column 7, lines 17-20). Applicants respectfully disagree.

Although Calvert may disclose a diamond layer, Calvert does not suggest or disclose that the diamond layer is used as an insulating layer. Nowhere in the cited passages of Calvert does Calvert suggest or disclose that the diamond layer acts as an insulator. Indeed, Calvert discloses that the diamond layer is acting as "an efficient heat sink for this circuitry" (Col. 6, lines 41-43)

or that the diamond layer can be used as a semiconductor (see Col.6, lines 45-47). Thus, Calvert does not suggest or disclose that the diamond layer is a first insulating layer.

In addition, Examiner contends on page 7 of the Final Office Action that after the oxidizing step, a first layer comprising diamond and a second layer comprising oxidized diamond would be obtained.

Even assuming, *arguendo*, that the diamond layer of Calvert could be construed as an insulating layer, Applicants respectfully submit that Calvert discloses a diamond layer having functional groups on the surface of the diamond layer (see Figure 1, steps 1-2, of Calvert) and does not disclose forming a second insulating layer having predetermined functional groups on a first insulating layer, as essentially claimed in claims 1, 12 and 15.

Calvert discloses that the oxidation treatment forms necessary oxygen containing surface groups, e.g., O-H groups, on the surface of the diamond layer in order to functionalize the oxidized surface with catalyzable functional groups (Col. 5, lines 30-37; Figure 1, steps 1-2). In other words, the oxidation treatment of Calvert forms O-H groups along the surface of the diamond layer for attaching functional groups thereto and not a second insulating layer formed on the diamond layer. Since Calvert discloses forming O-H groups along the surface of the diamond layer rather than forming an insulating layer on the diamond layer, Calvert does not suggest or disclose *forming a second insulating layer on the first insulating, the second insulating layer having predetermined functional groups*, as essentially claimed in claims 1, 15 and 22. Hence, Calvert does not disclose or suggest the claim limitations as contended by the Examiner.

Further, Applicants' admitted prior art (AAPA) does not cure the deficiencies of Calvert. Namely, AAPA does not suggest or disclose a method for forming an electrically conductive

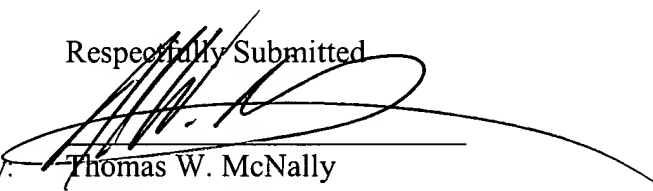
layer having patterns for semiconductor devices, *inter alia*, comprising the steps of forming a non-functional insulation layer on the substrate...forming a functional insulation layer on the non-functional insulation layer, the functional insulation layer having predetermined functional groups, as essentially claimed in claims 1, 15, and 22.

Therefore, claims 1, 15, and 22 are believed to be patentably distinct and non-obvious over Calvert and AAPA in the instant application because the combination of the above cited references fails to teach or suggest all the claim limitations of the claimed invention for at least the reasons as stated above.

Further, claims 2-13, depend from claim 1, and claims 16-17 depend from claim 15. As such, these claims are believed to be patentable for at least the reasons given for claims 1 and 15. Withdrawal of the claims rejection is respectfully requested.

In view of the foregoing remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable consideration of the case respectfully requested.

Respectfully Submitted

By:   
Thomas W. McNally  
Reg. No. 48,609  
Attorney for Applicants

F.CHAU & ASSOCIATES, LLC  
1900 Hempstead Turnpike, Suite 501  
East Meadow, New York 11554  
Telephone: (516) 357-0091  
Facsimile: (516) 357-0092